

### Abstract of the Disclosure:

In a method of forming a silicon oxide film, the silicon oxide film is formed on a substrate by the use of a plasma CVD method. A plasma-generating region is separated from a deposition region which includes excitation oxygen molecules and excitation oxygen atoms. Plasma of first gas containing oxygen atoms is formed in the plasma-generating region while second gas containing silicon atoms is supplied into the deposition region. First quantity of the excitation oxygen molecules and second quantity of the excitation oxygen atoms are controlled intentionally.